



SEQUENCE LISTING

<110> David

Kennedy, Michael J

<120> Salmonella Vaccine Materials and Methods

<130> 28341/6114.N

<140>

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<150> 60/190,178

<151> 2000-03-17

<160> 30

<170> PatentIn Ver. 2.0

<210> 1

<211> 779

<212> DNA

<213> Salmonella dublin

<400> 1

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cgtactttat tatttgaccg gcaattttta aaatatatcc aggcagagtg gagaacgctt 540
tatcaattat gtgtcagttt ctctcttcc gccataatat gtatggtatt agccgatctg 600
gcttttaggtc ttttaaactg gtcggcaca caattgaatg tgtttttctt ctcaatgccg 660
ctcaaaagta tattggttct actgacgctc ctgatctcat tcccttatgc tttcatcac 720
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<210> 2

<211> 779

<212> DNA

<213> *Salmonella typhimurium*

<400> 2

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aatggcgtgc ttatgtcact tacctttccg atattaccaa tcatttacca gcagaagatt 180
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ctcaaaagta tattggttct actgacgctc ctgatctcat tcccttatgc tcttcacac 720
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<210> 3

<211> 749

<212> DNA

<213> *Salmonella dublin*

<400> 3

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cagcatcata ttgatgcgga aaaaaaacag gaagaggacg gtgttacctt acgtgtcgag 180
cagtcgcagt ttattaatgc ggttgagcta cttagactta acggttatcc gcacgtcgag 240
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ggcgtgatta atgcaaaagt gaccattgag ctaccgactt atgatgaggg aagtaacgct 420
tctccgagct cagttgccgt atttataaaa tattcaccac aggtcaatat ggaggccttt 480

cgggtaaaaa ttaaggatTT aatagagatg tcaatccctg ggTtgcaata cagtaagatt 540
 agtatcttga tgcagcctgc tgaattcaga atggtagctg acgtaccgc gagacaaaca 600
 ttctggatta tggacgttat caacgccaat aaaggaagg tggagaagtg gttgatgaaa 660
 tacccttattc agttgatgtt attgttgaca ggactgttat taggagtggg catcctgattc 720
 ggctatTTTT gcctgagacg ccgtTTTTg 749

<210> 4

<211> 749

<212> DNA

<213> *Salmonella typhimurium*

<400> 4

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 cagtcgcagt ttattaatgc ggttgagcta cttagactta acggttatcc gcataggcag 240
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 cagcagaaga ttaattTTTT aaaagaacaa agaattgaag gaatgctgag tcagatggag 360
 ggcgtgatta atgcaaaagt gaccattgcg ctaccgactt atgatgaggg aagtaacgct 420
 tctccgagct cagttgccgt atttataaaa tattcacctc aggtcaatat ggaggccttt 480
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 agtatcttga tgcagcctgc tgaattcaga atggtagctg acgtaccgc gagacaaaca 600
 ttctggatta tggacgttat caacgccaat aaaggaagg tggagaagtg gttgatgaaa 660
 tacccttattc agttgatgtt atcgttgaca ggactgttat taggagtggg catcctgattc 720
 ggctatTTTT gcctgagacg ccgtTTTTg 749

<210> 5

<211> 1052

<212> DNA

<213> *Salmonella dublin*

<400> 5

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 gaggtttttac atctgctctc agagaactat gatacggcta ttactattag cccattgata 180
 acagctacat ttagtggaag aattccgcct ggaccaccgg tcgatatttt gaataacctg 240

gcagcacaat atgatttgct tacctgggtt gatggcagca tggtatatgt atatcctgca 300
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tacttacgca gccagaatat cctttcatca ccgggatgcg aggttaaaga aattaccggt 420
accaaagctg tggaggtgag cgggtgtccc agctgcctga ctcgtagtag tcaattagct 480
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acgcttaagt atgccactgc gatggatacc caataccaat atcgcgatca gtccgtcgtg 600
gttccagggg tcgtgagtgt attgctgtag atgagtaaaa ccagcgtacc ggcgtcatcg 660
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ggagatatta accagttagg catcgactgg ggaacggcag tgcgctggg tggcaagaaa 900
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cgatacctca aactttatgg tgcgtttgaa tgccctggaa aaaagctctc aggttatgt 1020
actttcccag ccattctgtg tgactttaaa ta 1052

<210> 6

<211> 1052

<212> DNA

<213> *Salmonella typhimurium*

<400> 6

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gagggttttac atctgctctc agagaactat gatacggcta ttactattag cccattgata 180
acagctacat ttagtggaag aattccgcct ggaccaccgg tcgatatttt gaataacctg 240
gcagcacaat atgatttgct tacctgggtt gatggcagca tggtatatgt atatcctgca 300
tcgttattaa aacatcaggt tatcactttc aatattttat ctactggacg gttcattcat 360
tacttacgca gccagaatat cctttcatca ccgggatgcg aggttaaaga aattaccggt 420
accaaagctg tggaggtgag cgggtgtccc agctgcctga ctcgtagtag tcaattagct 480
tcagtgtggt ataatgcgtt aatcaaacga aaagacagtg cggtgagtgt aagtatatac 540
acgcttaagt atgccactgc gatggatacc cagtaccaat atcgcgatca gtccgtcgtg 600
gttccagggg tcgttagtgt attgctgtag atgagtaaaa ccagcgtccc gacgtcatcg 660
acgaacaatg gttcacccgc tacacaggca ttgcccattg ttgctgccga cccacgccag 720
aatgcagtga tcgttcgtga ttatgcggcc aatatggccg ggtatcggaa actcatcaca 780

gaattagatc aacgccagca gatgatagag atttcgggtga aaattatcga tgttaatgct 840
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 attgcgttca atacaggttt gaatgacggt ggtgctagtg gttttttcaa cggtaatcag 960
 cgatacctca aactttatgg tgcgtctgaa tgccctggaa aaaagctctc aggcttatgt 1020
 actttcccag ccatctgtgg tgactttaaa ta 1052

<210> 7

<211> 368

<212> DNA

<213> Salmonella typhimurium

<400> 7

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 aactatcata acggtcgtat tcacttatgt cagatactca agcaaacctt ctagacgaa 180
 gaactgcttt ttaaagcgtt ggctaactgg aaacccgcag cgttccaggg tattcctcaa 240
 cgattatfff tggtgcgca tgggcttgca atgagttggt ctccacctct ttccagctcc 300
 gccgagctct gggtacgatt acatcatcga caaataaaat ttctggagtc gcaatgcgtt 360
 catgggta 368

<210> 8

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 8

tggtttttat tcgaccattg agcctttc 28

<210> 9

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 9

tttatcgctt tcaaccaa at agtgatg 27
 <210> 10
 <211> 34
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer
 <400> 10
 gccaatctag aaattatttt cggaatttga taaa 34
 <210> 11
 <211> 49
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer
 <400> 11
 aggctgttct gttttctcgc tcacattcaa ccatgctctc caattcgta 49
 <210> 12
 <211> 49
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer
 <400> 12
 tacgaattgg agagcatggg tgaatgtgag cgagaaaaca gaacagcct 49
 <210> 13
 <211> 34
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer
 <400> 13

gccaatctag atcttttcta atcttataat attg 34

<210> 14

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 14

gccaatctag actgcagaac cgagccagga gcaa 34

<210> 15

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 15

cacctcgga tcaggtcggc tcataaaaaa ttaatcttct gctggt 46

<210> 16

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 16

aacagcagaa gattaatttt ttatgagccg acctgatccc gaggtg 46

<210> 17

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 17

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<210> 18

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 18

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<210> 19

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

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<210> 20

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 20

ttattcgggt ggggtataaa atgtaatatc caggctgtgc tg 42

<210> 21

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 21

gccaatctag attccccggca tcaacaaata aact 34

<210> 22

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 22

gccaaagtcga catagtaggt gttctgtggg caata 35

<210> 23

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 23

ttctggatta tagctattat gattgtttga taagtgattg agtcctga 48

<210> 24

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 24

tcaggactca atcacttata aaacaatcat aatagctata atccagaa 48

<210> 25

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 25

gccaaagtcga cgtgtacgaa caggcttcag tggat 35

<210> 26

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 26

gccaatctag atcaggcatt agaaatagcg cgtaa 35

<210> 27

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 27

atttttaata tacgattaaa cgctcaaaca ttttgccttc ttcaaaga 48

<210> 28

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 28

tctttgaaga aggcaaaatg tttgagcggt taatcgtata ttaaaaat 48

<210> 29

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 29

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35

<210> 30

<211> 368

<212> DNA

<213> S. dublin ssaM

<400> 30

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aactatcata acggtcgtat tcacttatgt cagatactca agcaaacttt cttagacgaa 180

gaactgcttt ttaaagcggt ggctaactgg aaactcgag cgttccaggg tattcctcaa 240

cgattatfff tggtgcgca tgggcttgca atgagttggt ctccacctct ttccagctcc 300

gccgagctct ggttacgatt acatcatcga caaataaaat ttctggagtc gcaatgcggt 360

catgggtta 368